

Australian Geodesy and Skykraft LEO Workshop, 28th-30th June 2022

Australian Geodesy Workshop Day 1, Tuesday 28th June

Venue: Jaeger 1 Seminar Room, Research School of Earth Sciences, ANU, 142 Mills Rd, Acton

Start	End	Speaker	Title
9:00	9:10	Brief Welcome	
Session 1: Reference Frames (Chair: Sten Claessens)			
9:10	9:30	Richard Stanaway (Quickclose)	Development of an OGC standard for deformation models in applied geodesy
9:30	9:50	Anna Riddell (GA)	The Australian Vertical Working Surface (measuring the gravity of the situation)
9:50	10:10	Salim Masoumi (GA)	IGS third Reprocessing and transition to ITRF2020
10:10	10:30	Craig Harrison (GA)	Updates to the Australian Geospatial Reference System
10:30	10:50	Yanming Feng (QUT)	Modelling and prediction of GNSS vertical time series using Machine Learning approaches
10:50	11:20	Morning Tea Break	
Session 2: Geodetic positioning (Chair: Anna Riddell)			
11:20	11:40	Ronald Maj (GA)	An analysis of GNSS carrier to noise and GPS "flex power"
11:40	12:00	Ken Harima (FrontierSI)	Advanced positioning algorithms in Ginan
12:00	12:20	Eldar Rubinov (FrontierSI)	PNT opportunities in Low Earth Orbit
12:20	12:40	Simon McClusky (GA)	Overview and status of the NPIC Ginan GNSS data analysis toolkit.
12:40	13:00	Yanming Feng (QUT)	Kurloo Technology: Internet of GNSS Things for Deformation Monitoring
13:00	13:20	Oleg Titov (GA)	Comparison of ITRF2014 and ITRF2020 for geodetic VLBI
13:20	13:40	Boye Zhou (UTas)	GNSS/INS application in the determination of water surface elevation
13:40	14:40	Lunch	
Session 3: Geophysical applications of geodesy (Chair: Shin-Chan Han)			
14:40	15:00	Xiaoli Deng (UoN)	Drive ocean depths in shallow coastal zones using ICESat-2 photon datasets
15:00	15:20	Andrew Marshall (UoN)	Adaptive Retracking of Satellite Radar Altimetry Waveforms
15:20	15:40	Peter Morgan (UC)	Extracting Time dependant signals in Antarctica
15:40	16:10	Afternoon tea break	
Venue: Jaeger 8 DA Brown Room, Research School of Earth Sciences			
16:10	16:30	Matt King (UTas)	Impact on GPS of surface mass loading changes in Antarctica and implications for glacial isostatic adjustment inferences
16:30	16:50	Zahra Gharineiat (USQ)	Sea level prediction using deep learning methods
16:50	17:10	Xiaoli Deng (UoN)	Australian Coastal Sea Level Trends from 16 Years of Reprocessed Jason Altimeter 20-Hz Datasets
17:10	17:30	Mahdiyeh Razeghi (ANU)	Characterization of changes in groundwater storage in the Lachlan Catchment, Australia
17:30	-	Drinks (location TBA)	

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Australian Geodesy Workshop Day 2, Wednesday 29th June

Venue: Jaeger 1 Seminar Room, Research School of Earth Sciences, ANU, 142 Mills Rd, Acton

Start	End	Speaker	Title
Session 4: Geophysical applications of geodesy (Chair: Simon McClusky)			
9:00	9:20	Siddharth Krishnamoorthy (JPL)	Real-time monitoring of the ionosphere for natural hazards using the JPL GUARDIAN system
9:20	9:40	Siyuan Zhao (ANU)	Co-seismic and Post-seismic Deformation Associated with the 2018 Lombok, Indonesia, Earthquake Sequence, and its Impact on the Rinjani Volcano
9:40	10:00	Shin-Chan Han (UoN)	Geodesy and geohazard experiment with CubeSat GNSS tracking data
10:00	10:20	Takeo Ito (Nagoya)	GNSS-TEC tomography and tsunami detection by GNSS-TEC back projection method
10:20	10:50	Morning Tea Break	
10:50	11:10	Siyuan Zhao (ANU)	New insights into surface deformation of the Indonesia-Australian-New Guinea collision zone from a board-scale synthetic kinematic model
Session 5: Geophysical applications of geodesy (Chair: Mahdiyeh Razeghi)			
11:10	11:30	Paul Tregoning (ANU)	It was a good idea to write our own GRACE software!
11:30	11:50	Lachlan Dodd (ANU)	Analysis of the final year of GRACE data
11:50	12:10	Kit Leong (ANU)	Comparison of Altimetry and GRACE mascon solution of Antarctic mass loss
12:10	12:30	Guadalupe Alvarez (ANU)	Assessment of GIA from GRACE and GPS data
12:30	13:30	Lunch and Industrial Transformation Training Centre (ITTC) discussion	
13:30	13:50	Rebecca McGirr (ANU)	Interplay of altitude, ground tracks and regularisation on GRACE spatial resolution
13:50	14:10	Shin-Chan Han (UoN)	New processing of GRACE Follow-On laser ranging measurements for short-term mass variability
14:10	14:30	Tony Purcell (ANU)	Just what is cold atom interferometry anyway?
Session 6: Geodesy activities in Australia (Chair: Eldar Rubinov)			
14:30	14:50	Nuddin Tengku (DELWP)	Geodesy Activities in Victoria
14:50	15:10	Nicholas Brown (GA)	What is the UN-GGIM Subcommittee on Geodesy?
15:10	15:40	Afternoon Tea Break	
15:40	16:00	Tiege McCarthy (UTas)	State of the AuScope VLBI array and current projects
16:00	16:20	Sten Claessens (Curtin)	Recent research results of the Western Australian Geodesy Group
16:20	16:40	Chris Rizos (UNSW)	What more can geodesy do for the geosciences?
16:40	17:00	Zheyuan Du (GA)	National Scale InSAR for Australia
17:00	17:20	Ryan Ruddick (GA)	The National Positioning Infrastructure
17:20	-	Closing remarks followed by drinks (location TBA)	

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Skykraft LEO Workshop Day 3, Thursday 30th June

Venues: Jaeger 1 Seminar Room, Research School of Earth Sciences, ANU, 142 Mills Rd, Acton and Skykraft Pty Ltd, Building J, UNSW Canberra City, 37 Constitution Ave, Reid

Start	End	Activity
9:00	10:30	Welcome, introductions and Skykraft presentation on company technology, capabilities and plans
10:30	11:00	Morning Tea Break
11:00	12:30	Technical session: LEO Geodesy and science applications
12:30	13:30	Lunch
13:30	14:30	Discussion, wrap-up and how to proceed to next steps
14:30	15:00	Walk or own transport from RSES to Skykraft HQ
15:00	-	Tour of Skykraft HQ, LEO design and manufacturing facility Followed by drinks